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SOUTHERN FOREST EXPERIMENT STATION

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POLE AND PILE TIMBER
IN FOUR SOUTHEASTERN SURVEY UNITS

By

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* - This is an advance release of Forest Survey data that will be included in complete reports to be published later. This information is subject to correction or amplification as computations proceed.

POLE AND PILE TIMBER

IN FOUR SOUTHEASTERN SURVEY UNITS

This release presents, for four Forest Survey units, advance information on the amount and character of timber that is suitable for conversion into poles and piles. These units, shown in Figure 1, lie in South Carolina, Georgia, and northeast Florida, in the coastal plain region. Along the Atlantic and Gulf coasts the terrain is characterized by sandy, poorly drained flatwoods that extend from twenty miles inland on the Gulf Coast of Florida to over one hundred miles in southeast Georgia. Behind the coastal strip the country is gently rolling. Thirty percent of the area is in rolling uplands; 40 percent in flatwoods; 27 percent in bays, ponds, swamps, and branches; and 3 percent is in river bottoms.

The area is well served by railroads. Port facilities are available at Charleston, S. C.; Savannah and Brunswick, Ga.; and Jacksonville and Fernandina, Fla. River transportation exists on the St. Johns and Savannah Rivers and is feasible on several other larger streams. The Intercoastal waterway, available for barge transportation and rafting, passes down the Atlantic Coast. An extensive system of paved, improved, and country roads serves practically the entire area. With the exception of the interiors of a few of the larger swamps, poles and piles can be and are moved to shipping points from all parts of the region.

Commercial wood preserving plants are located, within the area covered, at Savannah and Brunswick, Ga.; and at Jacksonville, Fla. Nearby commercial plants drawing a part of their supplies from the same region are at Charleston and Spartanburg, S. C.; Augusta and Atlanta, Ga.; Birmingham, Montgomery, Brewton, and Mobile, Ala.; Pensacola, Fla.; and Chattanooga, Tenn. Railroad creosoting plants are located at Macon, Ga., and at Gainesville and Hull, Fla. The Gainesville plant is inactive.

Information presented in this release is based on data gathered during 1934 and 1935 by the Southern Forest Survey, an activity of the Southern Forest Experiment Station of the U. S. Forest Service. Trained cruisers measured the timber and recorded the forest and land-use conditions on nearly 38,000 quarter acre sample plots systematically located at intervals of 660 feet on parallel compass lines, 10 miles apart, run entirely across the area from east to west. The preliminary estimates presented here are subject to revision later in final survey unit reports.

While estimates are given here of the number of trees that have the qualifications for pole and pile use, no attempt is made to show what part of this resource is available for this use. Other wood-products industries must be supplied with raw materials, and are constantly converting pole and pile timber into other commodities. In the final unit and regional reports, analysis and interpretation of the resource situation will be undertaken.

In the presentation of these data, it is to be noted that owing to the sampling method used in collecting them, usually the greater the area or volume in any given classification the more accurate are the data for that classification. Classes that are of infrequent occurrence and relatively small in quantity cannot generally be determined with as high a degree of accuracy as is obtainable for classes that occur more frequently and in substantially greater quantities.

LAND AREA

The four survey units covered in this release include a land area of approximately 30 million acres, of which over 20 million acres are in for-

est. In Table 1 the land area of each survey unit is classified according to forest and nonforest area.

TABLE 1. — Land area of each survey unit classified according to forest and nonforest area

Unit	Total area	Forest area 1/	Nonforest area	Percent of forest
----- Acres -----				
South Carolina #1	5,186,900	2,993,000	2,193,900	57.7
Georgia #1 2/	9,711,200	7,056,200	2,655,000	72.7
Georgia #2	5,585,900	3,020,400	2,565,500	54.1
Florida #1 3/	9,515,600	7,378,900	2,136,700	77.5
Total	29,999,600	20,448,500	9,551,100	68.2

1/ 87,600 acres of non-productive forest area is included.

2/ Does not include Okefenokee Swamp and Coastal Islands.

3/ Does not include Ocala National Forest.

FOREST AREA

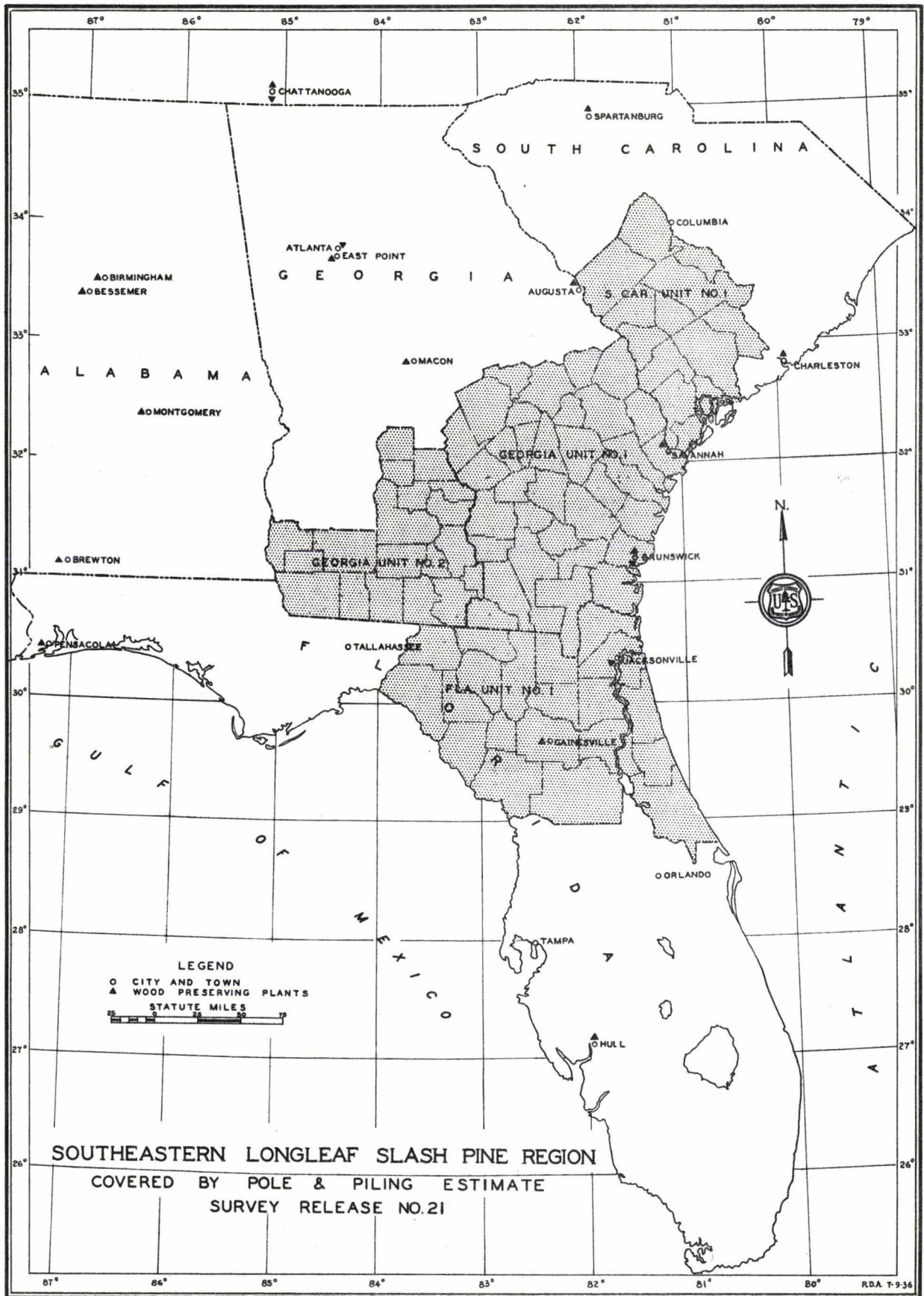
Table 2 classifies the productive forest area of each survey unit by forest-type groups. The forest-type groups are designated by their pre-dominant species. A large part of the loblolly-shortleaf-hardwood type in the region is found in the South Carolina unit.

TABLE 2. — Productive forest area classified according to forest-type group 1/

Unit	Longleaf-slash pine	Loiblolly-shortleaf-hardwood	Upland hardwood	Bottomland hardwood	Total
----- Acres -----					
South Carolina #1	1,024,700	1,224,100	49,800	694,400	2,993,000
Georgia #1	5,224,000	962,300	21,000	848,400	7,056,200
Georgia #2	2,230,300	448,900	49,500	285,300	3,014,000
Florida #1	5,553,700	585,000	97,800	1,061,200	7,297,700
Total	14,032,700	3,220,800	218,100	2,889,300	20,360,900
Percent of total	68.9	15.8	1.1	14.2	100.0

1/ Does not include 87,600 acres of non-productive forest land.

FIGURE 1.



POLE AND PILE ESTIMATE

The following estimate covers the pine species only. No pole and pile estimate has been made for cypress and hardwood species. The trees suited for use as poles and piles occur scattered throughout the forest stands of the area, singly and in groups. They are found mainly in the areas occupied by the longleaf-slash and loblolly-shortleaf-hardwood forest types, but also occur in the other type areas.

It is believed that the estimate of the number of pole and pile trees is very conservative. The difficulty of accurately judging standing trees in respect to their ability to meet the exacting technical specifications of users of poles and pile can be readily appreciated. It is likely that the estimate of the number of suitable trees may be short of the actual number on the area. The chief value of the estimate to the industry lies in its true reflection of the proportion of lengths and sizes occurring in the forest stands in the several units.

Table 4 shows the total number of trees in the combined four survey units that will meet standard specifications, classifying them according to principal species group, turpentine status, pole and pile length class and tree-diameter class. The tree-species groups and turpentine conditions are as follows:

Round longleaf and slash pines:	Trees of these species that have not been turpented.
Turpented longleaf and slash pines:	Trees that are being or have been turpented, and consequently bear one or more turpentine faces on the butt section.
Loblolly and other pines:	Loblolly, shortleaf, pond, and scrub pines. A small amount of cedar is included.

The area covered by this estimate is in the heart of the active naval stores belt, and, as a rule, trees of the longleaf and slash pine species will be turpented before being cut for any other use. The presence of one or more turpentine faces usually reduces the length that may be used for a pole or pile by from 5 to 10 feet. This reduction has been made by the cruisers in the case of turpented trees. Loblolly, shortleaf, pond, and scrub pines do not have this naval stores complex.

In the four survey units, there are 77,842,000 pine trees suited for pole and pile use. For the region as a whole, 73 percent of the suitable trees will produce poles or piles in the 20- and 25-foot length classes; 21 percent will produce 30- and 35-foot lengths; and 6 percent will produce lengths of 40 feet or longer.

In Tables 4 to 7, the number of trees suitable for poles and piles of the various lengths is shown for each of the four survey units and classified according to tree diameter. Aside from the total numbers of suitable trees, and the proportions by species and turpentine conditions, which differ considerably, a striking similarity exists between the figures for all four units. Almost half of the pole and pile timber in the South Carolina unit is loblolly pine. In each of the other three units, over 90 percent is longleaf and slash pine. In Georgia Unit No. 1, almost two-thirds of the suitable longleaf and slash pine trees carry turpentine faces; in Georgia Unit No. 2, over half; and in the Florida and South Carolina units, only about one-third are so faced, as yet.

TABLE 3. - Number of trees suited for pole and pile use, four survey units combined
(S. C. No. 1, Ga. Nos. 1 and 2, and Fla. No. 1)

Tree diameter class	Species group	Pole or piling length (feet)								Total	Percent of total
		20	25	30	35	40	45	50	55+		
Inches		----- Thousands of trees -----									
7.0 - 8.9	Round longleaf and slash pines	13,918	3,558	1,653	164	-	-	-	-	19,293	24.8
	Turpentine longleaf and slash pines	3,795	1,138	384	150	-	-	-	-	5,467	7.0
	Loblolly and other pines	1,702	365	108	-	-	-	-	-	2,175	2.8
	Total	19,415	5,061	2,145	314	-	-	-	-	26,935	34.6
9.0 - 10.9	Round longleaf and slash pines	4,422	2,306	1,494	783	284	79	-	-	9,368	12.1
	Turpentine longleaf and slash pines	5,261	2,124	995	574	339	-	-	-	9,293	11.9
	Loblolly and other pines	1,714	698	426	215	65	-	-	-	3,118	4.0
	Total	11,397	5,128	2,915	1,572	688	79	-	-	21,779	28.0
11.0 - 12.9	Round longleaf and slash pines	1,303	1,064	748	604	351	132	70	-	4,272	5.5
	Turpentine longleaf and slash pines	3,588	2,050	1,214	833	583	111	-	-	8,379	10.8
	Loblolly and other pines	1,009	663	584	310	214	-	-	-	2,780	3.5
	Total	5,900	3,777	2,546	1,747	1,148	243	70	-	15,431	19.8
13.0 - 14.9	Round longleaf and slash pines	323	416	339	310	224	149	60	29	1,850	2.4
	Turpentine longleaf and slash pines	1,525	1,206	872	649	410	144	37	9	4,852	6.2
	Loblolly and other pines	374	427	462	253	148	72	25	6	1,767	2.3
	Total	2,222	2,049	1,673	1,212	782	365	122	44	8,469	10.9
15.0 - 16.9	Round longleaf and slash pines	47	140	144	129	107	69	30	32	698	0.9
	Turpentine longleaf and slash pines	396	466	430	324	174	72	54	25	1,941	2.5
	Loblolly and other pines	96	224	299	178	95	63	26	15	996	1.3
	Total	539	830	873	631	376	204	110	72	3,635	4.7
17.0 - 18.9	Round longleaf and slash pines	-	41	61	57	44	31	20	15	269	0.3
	Turpentine longleaf and slash pines	59	201	242	176	89	31	21	35	854	1.1
	Loblolly and other pines	-	93	155	105	53	39	12	13	470	0.6
	Total	59	335	458	338	186	101	53	63	1,593	2.0
All diameter classes	Round longleaf and slash pines	20,013	7,525	4,439	2,047	1,010	460	180	76	35,750	46.0
	Turpentine longleaf and slash pines	14,624	7,185	4,137	2,706	1,595	358	112	69	30,786	39.5
	Loblolly and other pines	4,895	2,470	2,034	1,061	575	174	63	34	11,306	14.5
	Total	39,532	17,180	10,610	5,814	3,180	992	355	179	77,842	100.0
Percent of total		50.7	22.1	13.6	7.5	4.1	1.3	0.5	0.2	100.0	

TABLE 4. - Number of trees suited for pole and pile use, South Carolina Unit No. 1

Tree diameter class	Species group	Pole or piling length (feet)								Total	Percent of total
		20	25	30	35	40	45	50	55+		
Inches		----- Thousands of trees -----									
7.0 - 8.9	Round longleaf and slash pines	2,070	595	170	-	-	-	-	-	2,835	18.0
	Turpentine longleaf and slash pines	408	106	39	-	-	-	-	-	553	3.5
	Loblolly and other pines	1,064	97	61	-	-	-	-	-	1,222	7.8
	Total	3,542	798	270	-	-	-	-	-	4,610	29.3
9.0 - 10.9	Round longleaf and slash pines	653	537	266	168	51	-	-	-	1,675	10.7
	Turpentine longleaf and slash pines	521	187	125	38	-	-	-	-	871	5.5
	Loblolly and other pines	1,183	356	277	119	39	-	-	-	1,974	12.5
	Total	2,357	1,080	668	325	90	-	-	-	4,520	28.7
11.0 - 12.9	Round longleaf and slash pines	238	302	219	106	87	-	-	-	952	6.0
	Turpentine longleaf and slash pines	277	154	138	71	6	-	-	-	646	4.1
	Loblolly and other pines	704	389	370	157	141	-	-	-	1,761	11.2
	Total	1,219	845	727	334	234	-	-	-	3,359	21.3
13.0 - 14.9	Round longleaf and slash pines	61	112	119	58	36	-	-	-	386	2.4
	Turpentine longleaf and slash pines	135	113	103	71	12	-	-	-	434	2.8
	Loblolly and other pines	261	273	283	141	100	32	-	-	1,090	6.9
	Total	457	498	505	270	148	32	-	-	1,910	12.1
15.0 - 16.9	Round longleaf and slash pines	10	42	58	32	6	-	-	-	148	1.0
	Turpentine longleaf and slash pines	32	41	42	29	10	-	-	-	154	1.0
	Loblolly and other pines	67	158	193	97	61	29	-	-	605	3.8
	Total	109	241	293	158	77	29	-	-	907	5.8
17.0 - 18.9	Round longleaf and slash pines	-	16	26	19	-	-	-	-	61	0.4
	Turpentine longleaf and slash pines	3	26	29	19	7	-	-	-	84	0.5
	Loblolly and other pines	-	74	109	64	32	16	-	-	295	1.9
	Total	3	116	164	102	39	16	-	-	440	2.8
All diameter classes	Round longleaf and slash pines	3,032	1,604	858	383	180	-	-	-	6,057	38.5
	Turpentine longleaf and slash pines	1,376	627	476	228	35	-	-	-	2,742	17.4
	Loblolly and other pines	3,279	1,347	1,293	578	373	77	-	-	6,947	44.1
	Total	7,687	3,578	2,627	1,189	588	77	-	-	15,746	100.0
Percent of total		48.8	22.7	16.7	7.6	3.7	0.5	-	-	100.0	

TABLE 5. - Number of trees suited for pole and pile use, Georgia Unit No. 1

Tree diameter class	Species group	Pole or piling length (feet)								Total	Percent of total
		20	25	30	35	40	45	50	55+		
Inches		----- Thousands of trees -----									
7.0 - 8.9	Round longleaf and slash pines	3,553	887	445	50	-	-	-	-	4,935	19.2
	Turpentine longleaf and slash pines	1,961	598	199	87	-	-	-	-	2,845	11.0
	Loblolly and other pines	255	106	19	-	-	-	-	-	380	1.5
	Total	5,769	1,591	663	137	-	-	-	-	8,160	31.7
9.0 - 10.9	Round longleaf and slash pines	915	430	298	150	56	19	-	-	1,868	7.2
	Turpentine longleaf and slash pines	2,450	993	443	270	168	-	-	-	4,324	16.8
	Loblolly and other pines	209	134	59	38	9	-	-	-	449	1.8
	Total	3,574	1,557	800	458	233	19	-	-	6,641	25.8
11.0 - 12.9	Round longleaf and slash pines	277	199	137	131	68	34	19	-	865	3.3
	Turpentine longleaf and slash pines	1,715	1,006	579	414	311	66	-	-	4,091	15.9
	Loblolly and other pines	146	134	103	74	35	-	-	-	492	1.9
	Total	2,138	1,339	819	619	414	100	19	-	5,448	21.1
13.0 - 14.9	Round longleaf and slash pines	78	90	65	75	56	44	18	10	436	1.7
	Turpentine longleaf and slash pines	760	604	426	321	221	81	22	6	2,441	9.5
	Loblolly and other pines	62	84	100	62	25	21	16	3	373	1.4
	Total	900	778	591	458	302	146	56	19	3,250	12.6
15.0 - 16.9	Round longleaf and slash pines	12	35	32	34	37	25	12	12	199	0.8
	Turpentine longleaf and slash pines	221	258	240	181	100	43	34	16	1,093	4.2
	Loblolly and other pines	19	43	68	53	22	22	16	9	252	1.0
	Total	252	336	340	268	159	90	62	37	1,544	6.0
17.0 - 18.9	Round longleaf and slash pines	-	9	13	12	16	12	7	6	75	0.3
	Turpentine longleaf and slash pines	37	115	146	103	53	22	12	25	513	2.0
	Loblolly and other pines	-	16	37	31	15	16	9	10	134	0.5
	Total	37	140	196	146	84	50	28	41	722	2.8
All diameter classes	Round longleaf and slash pines	4,835	1,650	990	452	233	134	56	28	8,378	32.5
	Turpentine longleaf and slash pines	7,144	3,574	2,033	1,376	853	212	68	47	15,307	59.4
	Loblolly and other pines	691	517	386	258	106	59	41	22	2,080	8.1
	Total	12,670	5,741	3,409	2,086	1,192	405	165	97	25,765	100.0
Percent of total		49.2	22.3	13.2	8.1	4.6	1.6	0.6	0.4	100.0	

TABLE 6. - Number of trees suited for pole and pile use, Georgia Unit No. 2

Tree diameter class	Species group	Pole or piling length (feet)								Total	Percent of total
		20	25	30	35	40	45	50	55+		
Inches		----- Thousands of trees -----									
7.0 - 8.9	Round longleaf and slash pines	2,064	518	259	29	-	-	-	-	2,870	27.6
	Turpentine longleaf and slash pines	499	153	51	22	-	-	-	-	725	6.9
	Loblolly and other pines	121	52	9	-	-	-	-	-	182	1.8
	Total	2,684	723	319	51	-	-	-	-	3,777	36.3
9.0 - 10.9	Round longleaf and slash pines	709	333	230	115	45	16	-	-	1,448	13.9
	Turpentine longleaf and slash pines	745	304	137	86	54	-	-	-	1,326	12.8
	Loblolly and other pines	127	82	36	23	7	-	-	-	275	2.6
	Total	1,581	719	403	224	106	16	-	-	3,049	29.3
11.0 - 12.9	Round longleaf and slash pines	195	137	96	89	48	26	13	-	604	5.8
	Turpentine longleaf and slash pines	527	298	166	115	89	16	-	-	1,211	11.7
	Loblolly and other pines	61	54	45	32	16	-	-	-	208	2.0
	Total	783	489	307	236	153	42	13	-	2,023	19.5
13.0 - 14.9	Round longleaf and slash pines	39	44	32	38	28	23	10	3	217	2.1
	Turpentine longleaf and slash pines	230	176	125	93	64	22	6	-	716	6.9
	Loblolly and other pines	19	29	32	19	10	6	3	-	118	1.1
	Total	288	249	189	150	102	51	19	3	1,051	10.1
15.0 - 16.9	Round longleaf and slash pines	6	13	9	13	13	9	3	4	70	0.7
	Turpentine longleaf and slash pines	54	63	54	45	26	10	7	3	262	2.5
	Loblolly and other pines	4	10	16	9	3	3	3	3	51	0.5
	Total	64	86	79	67	42	22	13	10	383	3.7
17.0 - 18.9	Round longleaf and slash pines	-	3	3	4	3	3	3	-	19	0.2
	Turpentine longleaf and slash pines	6	19	20	16	10	3	3	3	80	0.8
	Loblolly and other pines	-	-	3	3	3	4	-	-	13	0.1
	Total	6	22	26	23	16	10	6	3	112	1.1
All diameter classes	Round longleaf and slash pines	3,013	1,048	629	288	137	77	29	7	5,228	50.3
	Turpentine longleaf and slash pines	2,061	1,013	553	377	243	51	16	6	4,320	41.6
	Loblolly and other pines	332	227	141	86	39	13	6	3	847	8.1
	Total	5,406	2,288	1,323	751	419	141	51	16	10,395	100.0
Percent of total		52.0	22.0	12.7	7.2	4.0	1.4	0.5	0.2	100.0	

TABLE 7. - Number of trees suited for pole and pile use, Florida Unit No. 1

Tree diameter class	Species group	Pole or piling length (feet)								Total	Percent of total
		20	25	30	35	40	45	50	55+		
Inches		----- Thousands of trees -----									
7.0 - 8.9	Round longleaf and slash pines	6,231	1,558	779	85	-	-	-	-	8,653	33.4
	Turpentine longleaf and slash pines	927	281	95	41	-	-	-	-	1,344	5.2
	Loblolly and other pines	262	110	19	-	-	-	-	-	391	1.5
	Total	7,420	1,949	893	126	-	-	-	-	10,388	40.1
9.0 - 10.9	Round longleaf and slash pines	2,145	1,006	700	350	132	44	-	-	4,377	16.9
	Turpentine longleaf and slash pines	1,545	640	290	180	117	-	-	-	2,772	10.7
	Loblolly and other pines	195	126	54	35	10	-	-	-	420	1.6
	Total	3,885	1,772	1,044	565	259	44	-	-	7,569	29.2
11.0 - 12.9	Round longleaf and slash pines	593	426	296	278	148	72	38	-	1,851	7.1
	Turpentine longleaf and slash pines	1,069	592	331	233	177	29	-	-	2,431	9.3
	Loblolly and other pines	98	86	66	47	22	-	-	-	319	1.3
	Total	1,760	1,104	693	558	347	101	38	-	4,601	17.7
13.0 - 14.9	Round longleaf and slash pines	145	170	123	139	104	82	32	16	811	3.1
	Turpentine longleaf and slash pines	400	313	218	164	113	41	9	3	1,261	4.9
	Loblolly and other pines	32	41	47	31	13	13	6	3	186	0.7
	Total	577	524	388	334	230	136	47	22	2,258	8.7
15.0 - 16.9	Round longleaf and slash pines	19	50	45	50	51	35	15	16	281	1.1
	Turpentine longleaf and slash pines	89	104	94	69	38	19	13	6	432	1.7
	Loblolly and other pines	6	13	22	19	9	9	7	3	88	0.3
	Total	114	167	161	138	98	63	35	25	801	3.1
17.0 - 18.9	Round longleaf and slash pines	-	13	19	22	25	16	10	9	114	0.4
	Turpentine longleaf and slash pines	13	41	47	38	19	6	6	7	177	0.7
	Loblolly and other pines	-	3	6	7	3	3	3	3	28	0.1
	Total	13	57	72	67	47	25	19	19	319	1.2
All diameter classes	Round longleaf and slash pines	9,133	3,223	1,962	924	460	249	95	41	16,087	62.0
	Turpentine longleaf and slash pines	4,043	1,971	1,075	725	464	95	28	16	8,417	32.5
	Loblolly and other pines	593	379	214	139	57	25	16	9	1,432	5.5
	Total	13,769	5,573	3,251	1,788	981	369	139	66	25,936	100.0
Percent of total		53.1	21.5	12.5	6.9	3.8	1.4	0.5	0.3	100.0	

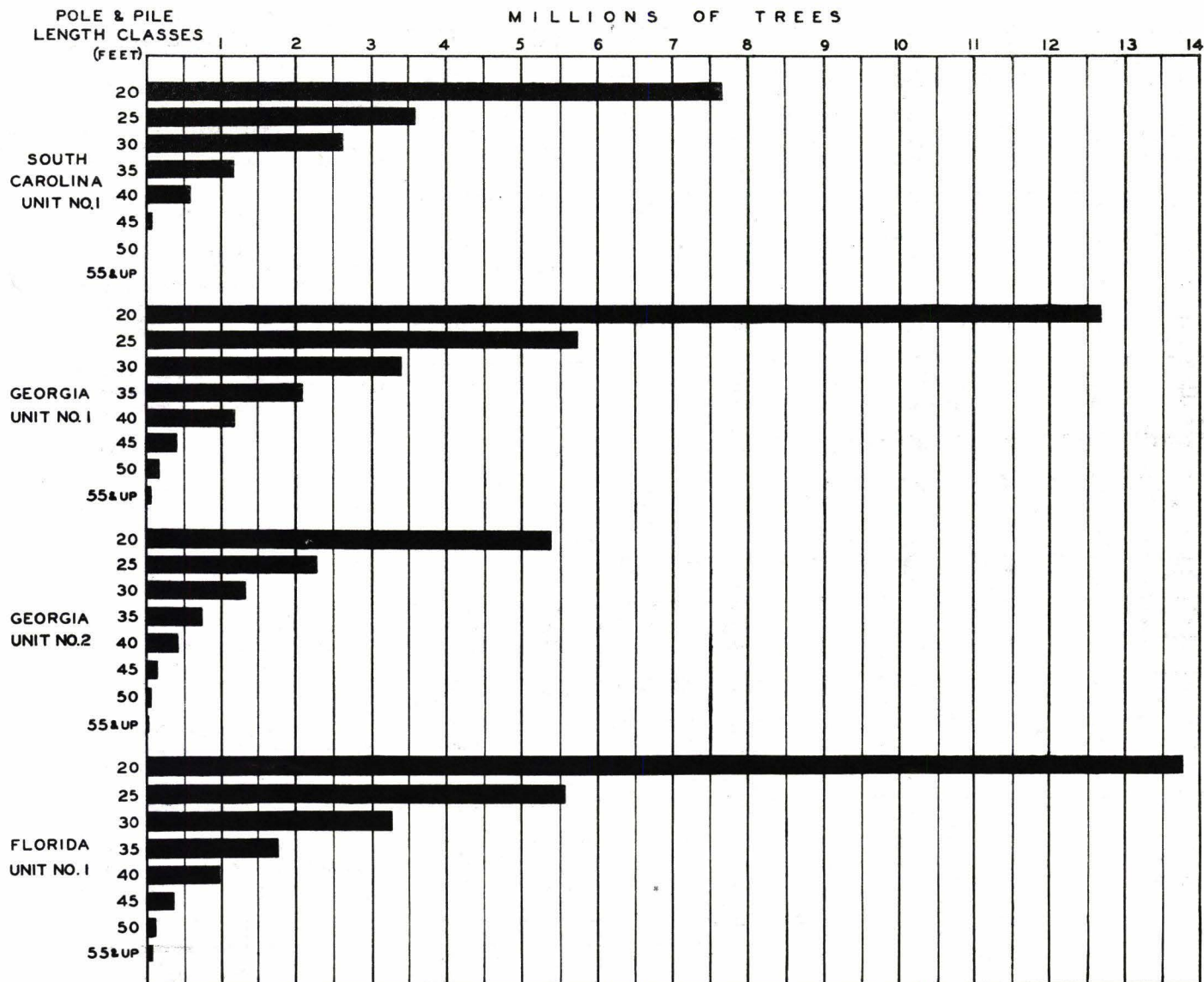


FIGURE 2. - POLE AND PILE TIMBER IN FOUR SOUTHEASTERN SURVEY UNITS

As to the relative showing of lengths, Georgia Unit No. 1 has the highest percentage of pole and pile timber that will produce lengths of 40 feet or longer, and the South Carolina unit has the lowest percentage that will produce such lengths. On the other hand, the South Carolina unit has the highest proportion, 24 percent, that will produce 30-and 35-foot lengths, and the Florida unit is at the bottom of the list with 19 percent of the pole and pile timber suited for these commonly used lengths. The relative proportions of different pole and pile lengths in the several units is shown graphically in Figure 2.

The frequency with which suitable trees occur is an important consideration. In this connection, an analysis was made that involved the assumption that the pine pole and pile timber occurs principally in sawtimber-size stands where pine comprises all or an important part of the forest. The large acreage of stands of less than sawtimber-size, and of predominantly hardwood and cypress forest types was eliminated from consideration. The remaining acreage, that is, the sawtimber acreage in the pine forest types for a given unit, was divided into the number of pole and pile trees for that unit. This gave a figure of the average number of suitable trees per acre for the forest stands in which the pole and pile timber is concentrated. The average figures for suitable trees of all length-classes are as follows: South Carolina Unit No. 1, 12.2 trees per sawtimber acre; Florida Unit No. 1, 11.6 trees; Georgia Unit No. 1, 9.1 trees; and Georgia Unit No. 2, 8.6 trees. For the 30-and 35-foot length-classes the average figures obtained are: South Carolina Unit No. 1, 3.0 per sawtimber acre; Florida Unit No. 1, 2.3 trees; Georgia Unit No. 1, 1.9 trees; Georgia Unit No. 2, 1.7 trees. The average figures for the length-classes of 40 feet and longer are: Florida Unit No. 1, 0.7 trees per sawtimber acre; Georgia Unit No. 1, 0.6 trees; Georgia Unit No. 2 and the South Carolina unit, 0.5 trees. It will be noted that the South Carolina unit averages highest for all lengths, excepting those of 40 feet and longer; the Florida unit ranks second; Georgia Unit No. 1, third; and Georgia Unit No. 2, fourth. A large proportion of the suitable timber in the Florida unit, however, is round longleaf and slash pine, which will probably be worked for turpentine before being cut for any other use. Discounting for the effect of future turpentinizing may put Georgia Unit No. 1 ahead of the Florida unit in this rating.

SUMMARY

The four survey units covered in this release, South Carolina No. 1, Georgia No. 1 and 2, and Florida No. 1, include a land area of 30 million acres, of which 20 million are in forest. Longleaf and slash pine types occupy 69 percent of the forest area; loblolly-shortleaf-hardwood types, 16 percent; and hardwood types, 15 percent. Old growth stands occupy 18 percent of the forest area; second growth 67 percent; reproduction 6 percent; and clear-cut areas 9 percent.

Trees suited for pole and pile use occur scattered throughout the forest stands, a tree here and there, most of which are accessible. The four units contain 78 million trees classified as potential pole and pile timber. 73 percent of these will produce poles and piles in the 20-and 25-foot lengths; 21 percent will produce 30-and 35-foot lengths, which are the lengths most commonly used; and 6 percent will produce lengths of 40 feet or more.

In the South Carolina unit, almost half of the pole and pile timber is loblolly pine. In each of the Georgia and Florida units, over 90 percent is longleaf and slash pine. Aside from the total numbers of suitable trees, and the proportions by species and turpentine conditions, a striking similarity exists between the figures for all four units. The per acre frequency with which suitable trees occur in the area from which most poles will be cut averages highest in the South Carolina unit, with the Florida unit second, Georgia Unit No. 1 third, and Georgia Unit No. 2 fourth.

The naval stores industry is dominant over the area, possibly excepting a part of the South Carolina unit, and longleaf and slash pine trees are usually turpented before being cut for any other use. Other forest industries, such as sawmills, container plants, and pulp mills, customarily cut pole and pile timber for their commodities without regard to its higher value for other uses.

It would be greatly to the financial advantage of timber owners if more attention were paid to converting each tree into the most valuable commodity that its qualifications would permit. Trees that would produce poles and piles should not be cut for pulpwood, for ties, or for low grade lumber. On the other hand, and in furtherance of better integration of forest industries, the users of poles and piles should more nearly harmonize their specifications and requirements with the woods run of lengths and diameters. This would materially increase the supply of merchantable pole and pile material and would encourage timber owners to give special consideration to the needs of the industry.